**Salmonella typhi (typhoid fever)**

**Signs/Symptoms:** couple day history of shaking chills, high fever, possible diarrhea, tender abdomen with hepatosplenomegaly, erythematous maculopapular lesions (rose spots). Low HR for fever, hypotension, just returned from India.

**DdX:** amebic hepatic abscesses, brucellosis, dengue fever, leishmaniasis, malaria, TB, typhoid fever (typhi or paratyphi); dengue/malaria/brucellosis manifest as nonspecific, septic-like illnesses; leishmaniasis causes fever/skin lesions and is not generally acute; TB usually has associated respiratory problems; typhoid fever in returning travelers, particularly from India and Southeast Asia, presents with prolonged fever, abdominal pain and a maculopapular rash (specific)

**Identification:** blood cultures, stool cultures, viral serology, blood smears, CT of abdomen. Non-lactose fermenting. Salmonella typhi has a capsule (K). Acquired by fecal-oral route, person-to-person, or by ingestion of food and water that is contaminated.

**Source/Epidemiology:** G- rod, facultative anaerobic, no lactose fermentation, encapsulated; uncommon in U.S., associated with travelers; acquired by fecal-oral route or by ingestion of food and water contaminated

**Pathology:** incubation period ranges from 3 days to 3 months; bind to M cells and invade Peyer’s Patches; migrate through intestinal mucosa of terminal ileum into submucosal lymph nodes; survive and multiple within macrophages; infiltration of mononuclear cells into the colonic mucosa; carried by monocytes to the reticuloendothelial system, causing hepatosplenomegaly; symptoms of enteric/typhoid fever come about after the secondary bacteremia; LPS elicits systemic immune response; rose spots caused by thrombocytopenia and capillary leakage are characteristic; reside in gallbladder and reenter the intestine causing diarrhea; chronic carriers are those with bacteria in the gall bladder

**Resistance/Susceptibility:** everyone

**Prevention/Treatment:** chloramphenicol, amp, tmp/smx; cipro or another fluroquinolone for resistant types; live attenuated vaccine available for travelers as well as a capsular polysaccharide antigen vaccine; avoid eating foods prepared outside of home or by street vendors